CANMET, Elliot Lake, Ontario

RADIOISOTOPE ANALYSIS OF SOLID SOLUTION SAMPLES FROM URANIUM TAILINGS

REQ. NO. 2-9006

CONTRACT REPORT NO. OSQ82-00048

Monenco No.	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		Activities in pCi/litre						
RW1431	J1	≤0.5	≤0.5	≤0.5	5.9± 1.7	≤0.5	≤7 ± 7	1/10/82
RW1432	J2	≤0.5	1.1± 0.7	≤0.5	3.9± 1.3	≤0.5	≤7 ± 7	1/10/82
RW1433	J3	≤0.5	≤0.5	2.1± 0.9	2.5± 1.2	≤0.5	≤7 ± 7	1/10/82
RW1434	J4	≤0.5	1.4± 0.8	≤0.5	11.8± 2.1	9.7 ± 3.2	≤7 ± 7	5/10/82
RW1435	J5	≤0.5	1.1± 0.8	1.4± 0.9	8.8± 1.7	5.8 ± 2.5	≤7 ± 7	5/10/82
RW1436	J6	14 ± 4	36 ± 5	≤0.5	99 ± 6	221 ±14	≤7 ± 7	5/10/82
RW1437	J7	≤0.5	4.2± 1.4	≤0.5	31 ± 3	95 ± 8	≤7 ± 7	5/10/82
RW1438	J8	0.8± 0.6	≤0.5	≤0.5	9.2± 1.6	25 ± 4	≤7 ± 7	5/10/82
RW1439	J9	2.3± 1.4	11 ± 3	≤0.5	14 ± 2	63 ± 8	≤7 ± 7	5/10/82
RW1440	J10	0.9± 0.8	2.4± 1.2	≤0.5	89 ± 6	104 ±10	25 ± 8	5/10/82
RW1441	J11	≤0.5	≤0.5	3 ± 3	100 ± 5	1.0 ± 0.8	55 ±10	5/10/82
RW1442	J12	9 ± 5	17 ± 6	≤0.3	90 ± 5	203 ±13	36 ± 9	5/10/82
RW1443	J13	2.1± 0.9	8.3± 1.5	≤0.5	32 ± 2	80 ± 6	22 ± 8	5/10/82
RW1444	J14	1.3± 1.3	24 ± 4	≤0.5	80 ± 6	198 ±15	99 ±12	5/10/82
RW1445	J15	≤0.5	≤0.5	≤0.5	23 ± 2	59 ± 5	≤7	5/10/82
RW1446	J16	≤0.5	≤0.5	≤0.5	8.8± 1.5	1.8 ± 0.8	≤7	25/01/83
RW1447	J17	≤0.5	≤0.5	≤0.5	25 ± 4	95 ± 8	≤7	25/01/83
RW1448	J18	≤0.5	19 ± 4	≤0.5	5.2± 1.9	25 ± 4	24 ± 8	25/01/83
RW1449	J19	≤0.5	≤0.5	≤0.5	16 ± 3	17 ± 3	10 ± 7	25/01/83
RW1450	J20	≤0.5	7 ± 5	≤0.5	69 ± 7	230 ±14	19 ± 7	25/01/83
RW1451	J21	6 ± 3	12 ± 5	≤0.5	14 ± 3	107 ±10	22 ± 8	25/01/83
RW1452	J22	≤0.5	≤0.5	≤0.5	4.1± 1.5	4.1 ± 1.7	≤7	25/01/83
RW1453	J23	≤0.5	≤0.5	≤0.5	4.3± 2	4.1 ± 2.2	16 ± 7	25/01/83

JAN 20 1984

MICROMEDIA

CANMET, Elliot Lake, Ontario

Monenco No.	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		Activities in pCi/litre						
RW1454	J24	4 ± 3	12 ± 7	≤0.5	100 ± 9	273 ±17	17 ± 7	25/01/83
RW1455	J25	4 ± 3	8 ± 5	≤0.5	77 ± 6	241 ±13	11 ± 7	25/01/83
RW1456	J26						10 ± 7	25/01/83
RW1457	J27	≤0.5	≤0.5	≤0.5	3.3± 0.4	6 ± 1	24 ± 7	25/01/83
RW1458	J28	≤0.5	≤0.5	≤0.5	0.9 ± 0.7	≤0.5	18 ± 7	20/10/82
RW1459	J29	≤0.5	≤0.5	≤0.5	3 ± 1	3 ± 2	23 ± 8	20/10/82
RW1460	J30	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	10 ± 7	20/10/82
RW1461	J31	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤7	20/10/82
RW1462	J32	≤0.5	≤0.5	≤0.5	0.6 ± 0.5	≤0.5	≤7	20/10/82
RW1463	J33	≤0.5	≤0.5	≤0.5	2.1 ± 0.7	0.7 ± 0.5	≤7	20/10/82
RW1464	J34	≤0.5	≤0.5	≤0.5	1.2 ± 0.8	0.5 ± 0.5	≤7	20/10/82
RW1465	J35	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤7	20/10/82
RW1466	J36	≤0.5	≤0.5	≤0.5	5.9 ± 1.7	≤0.5	≤7	20/10/82
RW1467	J37	≤0.5	0.9 ±0.7	≤0.5	5.5 ± 1.1	1.8 ± 1.2	≤7	20/10/82
RW1468	J38	0.8 ±0.8	3.2 ±1.2	1.3 ±0.8	4.8 ± 1.5	2.5 ± 1.8	≤7	20/10/82
RW1469	J39	≤0.5	≤0.5	≤0.5	7.7 ± 1.9	7 ± 2	≤7	20/10/82
RW1470	J40	≤0.5	6.1 ±1.6	≤0.5	155 ±10	126 ±10	51 ± 9	27/10/82
RW1471	J41	≤0.5	3.0 ±1.4	≤0.5	80 ± 5	55 ± 5	16 ± 7	27/10/82
RW1472	J42	≤0.5	≤0.5	≤0.5	2.6 ± 1.3	≤0.5	≤7	27/10/82
RW1473	J43	≤0.5	1.8 ±1.1	≤0.5	4.4 ± 1.5	13.2 ± 1.9	≤7	27/10/82
RW1474	J44	≤0.5	1.6 ±1.0	≤0.5	31 ± 4	89 ± 7	≤7	27/10/82
RW1475	J45	≤0.5	≤0.5	≤0.5	6.7 ± 1.2	13.2 ± 1.9	≤7	27/10/82
RW1476	J46	≤0.5	0.8 ±0.6	≤0.5	5.0 ± 1.6	5.8 ± 2.0	≤7	27/10/82

CANMET, Elliot Lake, Ontario

Monenco No.	Desc.	Activities in pCi/litre					Date
		Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	
RW1477	J47	≤0.5	≤0.5	≤0.5	1.5 ± 0.9	2.3 ± 1.3	≤7	27/10/82
RW1488	J48	≤0.5	≤0.5	≤0.5	≤0.5	1.6 ± 1.1	≤7	27/10/82
RW1479	J49	≤0.5	2.2 ±1.5	≤0.5	64 ± 6	12 ± 3	≤7	27/10/82
RW1480	J50	0.8 ±0.8	3.2 ±1.4	≤0.5	61 ± 5	14 ± 3	≤7	27/10/82
RW1481	J51	≤0.5	≤0.5	≤0.5	12 ± 2	1.8 ± 1.2	≤7	27/10/82
RW1482	J52	≤0.5	0.7 ±0.5	≤0.5	20 ± 3	4.7 ± 1.8	≤7	29/10/82
RW1483	J53	≤0.5	2.3 ±1.4	≤0.5	20 ± 4	6 ± 2	≤7	29/10/82
RW1484	J54	≤0.5	≤0.5	≤0.5	3.0 ± 1.3	1.8 ± 1.4	≤7	29/10/82
RW1485	J55	2.0 ±1.1	3.1 ±1.2	≤0.5	49 ± 4	9 ± 2	19 ± 7	29/10/82
RW1486	J56	≤0.5	0.9 ±0.7	≤0.5	11 ± 2	4.5 ± 1.6	12 ± 7	20/10/82
RW1487	J57	1.5 ±0.9	3.6 ±1.2	≤0.5	20 ± 5	21 ± 7	≤7	29/10/82
RW1488	J58	≤0.5	≤0.5	≤0.5	23 ± 4	3.9 ± 2.1	≤7	29/10/82
RW1489	J59	≤0.5	≤0.5	≤0.5	16 ± 3	2.0 ± 1.5	≤7	29/10/82
RW1490	J60	≤0.5	1.0 ±0.9	≤0.5	23 ± 3	3.7 ± 1.8	≤7	29/10/82
RW1491	J61	≤0.5	1.5 ±1.1	≤0.5	12 ± 3	9 ± 3	16 ± 7	29/10/82
RW1492	J62	≤0.5	≤0.5	≤0.5	13 ± 2	4.9 ± 1.7	≤7	29/10/82
RW1493	J63	≤0.5	≤0.5	≤0.5	2.9 ± 1.4	≤0.5	≤7	29/10/82
RW1494	J64	≤0.5	≤0.5	≤0.5	1.3 ± 0.8	1.1 ± 0.9	≤7	04/11/82
RW1495	J65	≤0.5	0.7 ±0.5	0.8 ±0.8	31 ± 3	2.4 ± 0.8	8 ± 7	04/11/82
RW1496	J66	≤0.5	≤0.5	≤0.5	4.2 ± 1.0	≤0.5	≤7	04/11/82
RW1497	J67	≤0.5	0.7 ±0.6	≤0.5	3.6 ± 1.1	≤0.5	10 ± 7	04/11/82
RW1498	J68	≤0.5	≤0.5	≤0.5	2.1 ± 0.8	≤0.5	8 ± 7	04/11/82
RW1499	J69	≤0.5	0.8 ±0.6	≤0.5	1.5 ± 0.6	≤0.5	34 ±14	04/11/82
RW1500	J70	≤0.5	≤0.5	≤0.5	0.7 ± 0.3	≤0.5	36 ±14	04/11/82

Monenco No.	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		Activities in pCi/litre						
RW1501	J71	0.8 ± 0.5	1.3 ± 0.6	≤0.5	7.3 ±1.2	2.8 ± 0.9	41 ±14	04/11/82
RW1502	J72	≤0.5	≤0.5	≤0.5	2.8 ±0.8	≤0.5	35 ±14	04/11/82
RW1503	J73	≤0.5	≤0.5	≤0.5	1.7 ±0.8	≤0.5	34 ±14	04/11/82
RW1504	J74	≤0.5	≤0.5	≤0.5	7.6 ±1.0	16.4 ± 1.9	23 ±14	04/11/82
RW1505	J75	≤0.5	≤0.5	≤0.5	3.9 ±0.8	3.6 ± 1.0	23 ±14	04/11/82
RW1506	J76	≤0.5	≤0.5	≤0.5	≤0.5	4 ± 2	≤13	04/11/82
RW1507	J77	≤0.5	≤0.5	≤0.5	0.8 ±0.7	≤0.5	23 ±14	04/11/82
RW1508	J78	≤0.5	≤0.5	≤0.5	0.8 ±0.7	2.0 ± 1.4	15 ±13	04/11/82
RW1509	J79	4 ± 3	51 ±10	≤0.5	25 ±4	106 ±10	33 ±14	04/11/82
RW1510	J80	≤0.5	≤0.5	7 ± 4	7.5 ±1.8	22 ± 4	19 ±14	04/11/82
RW1511	J81	≤0.5	1.2 ± 1.0	≤0.5	2.6 ±1.0	14 ± 3	≤13	04/11/82
RW1512	J82	≤0.5	1.9 ± 1.2	≤0.5	5.7 ±1.8	≤0.5	19 ±14	05/11/82
RW1513	J83	2.6 ± 1.6	8 ± 3	≤0.5	2.9 ±1.2	9 ± 3	≤13	05/11/82
RW1514	J84	≤0.5	1.5 ± 0.7	≤0.5	6.6 ±1.4	2.7± 1.2	17 ± 9	05/11/82
RW1515	J85	≤0.5	1.6 ± 1.0	≤0.5	9 ±2	25 ± 5	≤9	05/11/82
RW1516	J86	≤0.5	2.6 ± 1.9	≤0.5	6.4 ±1.5	24 ± 4	≤9	05/11/82
RW1517	J87	≤0.5	1.3 ± 1.0	≤0.5	8 ±2	6 ± 2	≤9	05/11/82
RW1518	J88	≤0.5	1.6 ± 0.6	≤0.5	4.4 ±0.7	6.0± 1.1	≤9	05/11/82
RW1519	J89	16 ± 4	45 ± 6	4 ± 3	60 ±4	195 ±12	≤9	05/11/82
RW1520	J90	1.6 ± 1.0	2.1 ± 1.1	1.5± 1.0	71 ±6	75 ± 8	17 ±10	05/11/82
RW1521	J91	≤0.5	1.5 ± 1.0	1.7± 1.0	24 ±3	35 ± 6	≤9	05/11/82
RW1522	J92	≤0.5	1.5 ± 1.2	18 ± 6	11 ±2	19 ± 5	≤9	05/11/82
RW1523	J93	≤0.5	≤0.5	≤0.5	12 ±2	14 ± 3	14 ± 7	05/11/82
RW1524	J94	≤0.5	0.8 ± 0.7	≤0.5	5.1 ±1.3	4 ± 2	12 ±10	05/11/82

CANMET, Elliot Lake, Ontario

Monenco No.	Desc.	Activities in pCi/litre Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
RW1525	J95	20 ± 7	115 ±18	8 ± 7	82 ± 6	288 ±20	18 ±10	05/11/82
RW1526	J96	≤0.5	2.2± 1.8	8 ± 7	29 ± 3	87 ± 9	≤9	05/11/82
RW1527	J97	≤0.5	≤0.5	4 ± 2	11.1 ± 1.8	26 ± 4	≤9	05/11/82
RW1528	J98	3 ± 2	50 ±10	7 ± 5	55 ± 5	193 ±15	≤9	05/11/82
RW1529	J99	≤0.5	≤0.5	≤0.5	21 ± 2	50 ± 5	≤9	05/11/82
RW1530	J100	≤0.5	0.8± 0.7	3 ± 2	38 ± 4	52 ± 6	24 ±11	11/11/82
RW1531	J101	0.9 ± 0.7	4.7± 1.4	5 ± 3	14 ± 2	19 ± 4	23 ±11	11/11/82
RW1532	J102	≤0.5	≤0.5	≤0.5	11.1 ± 1.5	5.6± 1.6	≤9	11/11/82
RW1533	J103	35 ± 6	88 ± 9	5 ± 4	111 ± 8	290 ±20	41 ±12	11/11/82
RW1534	J104	5.7 ± 1.8	24 ± 4	5 ± 4	93 ± 7	103 ±10	20 ±10	11/11/82
RW1535	J105	≤0.5	1.4± 0.6	≤0.5	15.4 ± 1.8	29 ± 4	12 ±11	11/11/82
RW1536	J106	≤0.5	≤0.5	≤0.5	6.7 ± 1.3	4.8± 1.8	≤9	11/11/82
RW1537	J107	≤0.5	≤0.5	5 ± 4	4.9 ± 1.6	30 ± 6	10 ± 8	11/11/82
RW1538	J108	10 ± 2	67 ± 6	7 ± 5	30 ± 3	72 ± 8	109 ±12	11/11/82
RW1539	J109	≤0.5	≤0.5	5 ± 4	6.2 ± 1.2	18 ± 3	≤9	11/11/82
RW1540	J110	0.7 ± 0.6	≤0.5	5 ± 4	2.0 ± 0.9	21 ± 4	10 ± 8	11/11/82
RW1541	J111	1.6 ± 1.0	1.6± 1.0	3 ± 2	36 ± 5	8 ± 4	23 ±14	11/11/82
RW1542	J112	≤0.5	1.8± 1.0	≤0.5	8.4 ± 1.7	2.5± 1.6	21 ±12	11/11/82
RW1543	J113	0.7 ± 0.6	≤0.5	≤0.5	9.0 ± 1.8	1.2± 1.0	13 ±10	11/11/82
RW1544	J114	0.7 ± 0.6	1.0± 0.8	0.8± 0.7	3.4 ± 1.1	1.8± 1.5	22 ±10	11/11/82
RW1545	J115	≤0.5	2.7± 1.5	0.8± 0.7	35 ± 5	4 ± 3	34 ±12	11/11/82
RW1546	J116	≤0.5	1.0± 0.9	≤0.5	8 ± 2	2 ± 1	17 ± 8	11/11/82
RW1547	J117	≤0.5	≤0.5	≤0.5	4.5 ± 1.5	≤0.5	16 ± 8	11/11/82
RW1548	J118	≤0.5	≤0.5	≤0.5	1.7 ± 1.0	1.6± 0.7	17 ± 8	08/11/82

CANMET, Elliot Lake, Ontario

Monenco No.	Desc.	Activities in pCi/litre						Date
		Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	
RW1549	J119	≤0.5	1.5± 0.9	≤0.5	4.9± 1.6	5.1± 1.4	22± 10	08/11/82
RW1550	J120	9 ± 4	31 ± 7	5 ± 2	72 ± 6	238 ± 15	80± 10	08/11/82
RW1551	J121	≤0.5	1.1± 0.8	4 ± 2	10 ± 3	55 ± 6	11± 7	08/11/82
RW1552	J122	≤0.5	≤0.5	4 ± 2	14 ± 3	24 ± 3	11± 7	08/11/82
RW1553	J123	≤0.5	≤0.5	1.7± 1.0	4.1± 1.2	8.1± 1.4	≤7	08/11/82
RW1554	J124	1773 ±150	3266 ±250	25 ± 5	87 ± 7	2906 ±120	1457± 65	08/11/82
RW1555	J125	≤0.5	≤0.5	2 ± 1	14 ± 3	237 ± 16	20± 8	08/11/82
RW1556	J126	1.0± 0.7	0.6± 0.5	0.6± 0.5	19 ± 3	81 ± 6	10± 7	08/11/82
RW1557	J127	≤0.5	≤0.5	2.1± 1.3	10.1± 1.9	46 ± 4	≤7	08/11/82
RW1558	J128	1.1± 0.2	4.0± 0.4	1.5± 0.4	25 ± 1.4	51 ± 2	≤7	08/11/82
RW1559	J129	0.7± 0.5	3.3± 1.4	3 ± 2	14 ± 4	26 ± 5	36± 13	08/11/82
RW1560	J130	≤0.5	≤0.5	≤0.5	2.5± 1.2	1.1± 2	≤7	05/01/83
RW1561	J131	≤0.5	0.6± 0.5	4 ± 3	4.5± 1.6	4 ± 2	≤7	05/01/83
RW1562	J132	≤0.5	0.5± 0.5	4 ± 2	4.9± 1.1	1.8± 0.8	≤7	05/01/83
RW1563	J133	≤0.5	≤0.5	≤0.5	1.7± 0.8	≤0.5	≤7	05/01/83
RW1564	J134	≤0.5	≤0.5	≤0.5	3.6± 1.1	4.4± 1.3	≤7	05/01/83
RW1565	J135	≤0.5	≤0.5	≤0.5	5.2± 1.5	2.7± 1.2	≤7	05/01/83
RW1566	J136	≤0.5	≤0.5	≤0.5	2.3± 0.8	≤0.5	31± 8	05/01/83
RW1567	J137	≤0.5	≤0.5	≤0.5	1.6± 0.2	≤0.5	9± 7	05/01/83
RW1568	J138	≤0.5	≤0.5	≤0.5	2.1± 1.1	9 ± 2	≤7	05/01/83
RW1569	J139	≤0.5	≤0.5	≤0.5	4.8± 0.7	1.8± 0.5	≤7	05/01/83
RW1570	J140	≤0.5	≤0.5	≤0.5	1.9± 1.1	1.0± 1.0	8± 7	05/01/83
RW1571	J141	≤0.5	≤0.5	3 ± 2	8 ± 2	34 ± 5	14± 8	05/01/83
RW1572	J142	≤0.5	≤0.5	≤0.5	2.8± 1.0	6.0± 1.5	≤7	05/01/83

CANMET, Elliot Lake, Ontario

Monenco No.	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		----------Activities in pCi/litre----------						
RW1573	J143	0.7± 0.6	≤0.5	≤0.5	≤0.5	2.8± 1.7	≤7	05/01/83
RW1574	J144	≤0.5	≤0.5	1.0± 0.5	86 ± 6	10 ± 2	52 ±10	05/01/83
RW1575	J145	≤0.5	≤0.5	3 ± 2	88 ± 7	30 ± 4	≤7	05/01/83
RW1576	J146	≤0.5	≤0.5	2 ± 1	9.9± 1.7	9 ± 2	≤7	06/01/83
RW1577	J147	≤0.5	0.6± 0.5	≤0.5	29 ± 4	11 ± 2	≤7	06/01/83
RW1578	J148	0.6± 0.5	≤0.5	≤0.5	12 ± 2	9 ± 2	≤7	06/01/83
RW1579	J149	≤0.5	≤0.5	≤0.5	16.8± 1.8	5.2± 1.2	≤7	06/01/83
RW1580	J150	≤0.5	≤0.5	2 ± 1	92 ± 5	303 ± 12	87 ± 9	06/01/83
RW1581	J151	≤0.5	≤0.5	2 ± 1	57 ± 4	43 ± 4	59 ± 8	06/01/83
RW1582	J152	0.6± 0.5	0.6± 0.5	≤0.5	12 ± 2	11 ± 2	27 ± 7	06/01/83
RW1583	J153	0.6± 0.5	0.8± 0.6	≤0.5	16 ± 2	7.3± 1.7	24 ± 7	06/01/83
RW1584	J154	51 ± 5	81 ± 6	192 ± 20	42 ± 5	453 ± 23	423 40	06/01/83
RW1585	J155	≤0.5	0.9± 0.5	36 ± 6	16 ± 2	53 ± 5	20 ± 7	06/01/83
RW1586	J156	≤0.5	0.7± 0.5	16 ± 6	8.2± 1.9	32 ± 5	14 ± 6	06/01/83
RW1587	J157	≤0.5	≤0.5	7 ± 4	7.6± 1.5	15 ± 3	17 ± 6	06/01/83
RW1588	J158	≤0.5	≤0.5	5 ± 3	6 ± 2	6 ± 2	27 ± 7	06/01/83
RW1589	J159	1.2± 0.6	3.7± 1.2	10 ± 4	97 ± 6	761 ± 26	639 ±32	06/01/83
RW1590	J160	≤0.5	≤0.5	≤0.5	31 ± 4	207 ± 13	41 ± 8	06/01/83
RW1591	J161	0.6± 0.5	0.7± 0.4	3 ± 2	126 ± 6	160 ± 8	62 ± 9	06/01/83
RW1592	J162	≤0.5	1.1± 0.7	2 ± 1	30 ± 2	43 ± 4	15 ± 6	06/01/83
RW1593	J163	≤0.5	1.0± 0.8	2 ± 1	86 ± 5	62 ± 5	37 ± 8	06/01/83
RW1594	J164	≤0.5	1.1± 0.6	≤0.5	239 ± 10	2360 ± 71	288 ± 8	07/01/83

Monenco No.	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		Activities in pCi/litre						
RW1595	J165	≤0.5	0.7± 0.5	≤0.5	112 ± 5	66 ± 4	49 ± 8	07/01/83
RW1596	J166	1.5± 0.5	5.7± 1.0	3 ± 2	114 ± 6	31 ± 3	31 ±10	07/01/83
RW1597	J167	≤0.5	≤0.5	≤0.5	75 ± 6	48 ± 5	27 ±10	07/01/83
RW1598	J168	≤0.5	≤0.5	≤0.5	74 ± 4	23 ± 3	26 ±10	07/01/83
RW1599	J169	≤0.5	0.6± 0.5	2 ± 1	119 ± 5	21 ± 2	69 ±12	07/01/83
RW1600	J170	≤0.5	≤0.5	4 ± 2	137 ± 5	444 ± 14	31 ±10	07/01/83
RW1601	J171	≤0.5	≤0.5	3 ± 2	63 ± 4	68 ± 5	24 ±10	07/01/83
RW1602	J172	0.9± 0.5	1.7± 0.8	≤0.5	80 ± 5	54 ± 5	39 ±10	07/01/83
RW1603	J173	≤0.5	≤0.5	2 ± 1	114 ± 5	30 ± 3	≤7	07/01/83
RW1604	J174	≤0.5	≤0.5	≤0.5	33 ± 3	13 ± 2	≤7	07/01/83
RW1605	J175	≤0.5	≤0.5	≤0.5	132 ± 6	232 ± 10	62 ±11	07/01/83
RW1606	J176	≤0.5	3.0± 0.9	≤0.5	12.4± 1.3	28 ± 2	33 ±10	07/01/83
RW1607	J177	≤0.5	≤0.5	10 ± 4	32 ± 3	308 ± 14	1838 ±82	07/01/83
RW1608	J178	≤0.5	≤0.5	29 ± 6	28 ± 1	138 ± 7	1039 ±50	07/01/83
RW1609	J179	≤0.5	≤0.5	11 ± 5	74 ± 5	96 ± 7	40 ±10	07/01/83
RW1610	J180	≤0.5	≤0.5	20 ± 11	104 ± 8	62 ± 8	16 ± 8	07/01/83
RW1611	J181	≤0.5	≤0.5	5 ± 4	106 ± 5	56 ± 5	40 ± 7	07/01/83
RW1612	J182	0.9± 0.6	4.0± 1.4	662 ± 33	86 ± 6	439 ± 18	1951 ±87	11/01/83
RW1613	J183	≤0.5	≤0.5	14 ± 6	107 ± 7	68 ± 7	68 ±11	11/01/83
RW1614	J184	≤0.5	≤0.5	6 ± 5	84 ± 7	46 ± 6	15 ±10	11/01/83
RW1615	J185	≤0.5	1.4± 0.9	5 ± 3	82 ± 7	32 ± 5	≤10 ±10	11/01/83
RW1616	J186	≤0.5	7.4± 1.2	5 ± 3	76 ± 5	36 ± 4	51 ±11	11/01/83
RW1617	J187	6.0± 1.2	66 ± 4	4 ± 3	12 ± 2	23 ± 3	12 ±10	11/01/83
RW1618	J188	0.8± 0.4	4.3± 0.9	5 ± 3	140 ± 7	44 ± 4	29 ±10	11/01/83

Monenco No.	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		Activities in pCi/litre						
RW1619	J189	0.8± 0.7	7.6± 2.0	0.5	28 ± 4	18 ± 4	157 15	11/01/83
RW1620	J190	0.5± 0.5	3.2± 0.8	8 ± 2	11.9± 1.8	8 ± 2	≤10 ± 10	11/01/83
RW1621	J191	0.5	0.5	60 ± 20	101 ± 12	579 ± 38	131 ± 15	11/01/83
RW1622	J192	0.5± 0.5	0.5	0.5	65 ± 8	41 ± 8	18 ± 10	11/01/83
RW1623	J193	5.8± 1.2	8.9± 1.5	104 ± 11	29 ± 3	460 ± 18	2114 ± 94	11/01/83
RW1624	J194	0.5	0.5	24 ± 5	99 ± 5	107 ± 6	620 ± 34	11/01/83
RW1625	J195	0.5	0.5	41 ± 7	17 ± 2	492 ± 17	2785 ±121	11/01/83
RW1626	J196	0.5	0.5	46 ± 15	39 ± 5	392 ± 23	217 ± 20	11/01/83
RW1627	J197	0.5	0.5	7.8± 0.8	138 ± 4	44.2± 1.4	55 ± 12	11/01/83
RW1628	J198	0.5	0.5	5 ± 2	186 ± 8	317 ± 14	382 ± 25	11/01/83
RW1629	J199	0.5	0.5	0.5	139 ± 7	52 ± 5	55 ± 12	11/01/83
RW1630	J200	0.5	6 ± 2	0.5	48 ± 4	10 ± 2	19 ± 10	12/01/83
RW1631	J201	0.5	0.5	3 ± 1	105 ± 3	85 ± 3	35 ± 11	12/01/83
RW1632	J202	0.5	0.5	0.5	40 ± 3	28 ± 3	10 ± 10	12/01/83
RW1633	J203	0.5	2.2± 0.7	7 ± 4	88 ± 4	62 ± 4	227 ± 15	12/01/83
RW1634	J204	0.7± 0.4	0.6± 0.5	5 ± 4	53 ± 4	65 ± 5	120 ± 11	12/01/83
RW1635	J205	0.5	0.5	6 ± 4	121 ± 8	61 ± 7	27 ± 7	12/01/83
RW1636	J206	3.9± 0.9	14.1± 1.7	128 ± 14	81 ± 4	694 ± 24	2421 ±103	12/01/83
RW1637	J207	0.5	3.4± 1.0	5 ± 3	62 ± 4	38 ± 4	25 ± 7	12/01/83
RW1638	J208	4.1± 0.5	10.3± 0.9	48 ± 6	111 ± 4	6098 ±164	1044 ± 45	12/01/83
RW1639	J209	0.5	1.5± 0.9	5 ± 3	120 ± 7	252 ± 14	42 ± 5	12/01/83
RW1640	J210	0.8± 0.4	0.9± 0.7	123 ± 18	52 ± 4	1007 ± 38	3473 ±142	12/01/83
RW1641	J211	0.5	0.6± 0.5	0.5	101 ± 5	55 ± 5	47 ± 6	12/01/83
RW1642	J212	1.8± 0.6	3.5± 0.9	65 ± 12	65 ± 4	1154 ± 39	1658 ± 70	12/01/83

Monenco No.	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		Activities in pCi/litre						
RW1643	J213	≤0.5	≤0.5	2 ± 1	11 ± 2	95 ± 8	57 ± 6	12/01/83
RW1644	J214	16 ± 2	28 ± 2	2 ± 1	38 ± 3	399 ± 17	2777 ±115	12/01/83
RW1645	J215	0.6± 0.4	1.6± 0.7	≤0.5	77 ± 4	135 ± 7	37 ± 5	12/01/83
RW1646	J216	26 ± 2	37 ± 3	582 ± 32	38 ± 3	716 ± 24	6175 ±256	12/01/83
RW1647	J217	9 ± 2	98 ± 6	45 ± 9	53 ± 4	73 ± 6	88 ± 7	12/01/83
RW1648	J218	15 ± 2	16 ± 2	112 ± 18	154 ±13	670 ± 35	3430 ±100	17/01/83
RW1649	J219	≤0.5	2.1± 0.8	≤0.5	7.5± 1.2	15 ± 2	12 ± 4	17/01/83
RW1650	J220	≤0.5	2.1± 0.8	7 ± 2	104 ± 5	11 ± 2	16 ± 4	17/01/83
RW1651	J221	16 ± 2	20 ± 2	255 ± 15	31 ± 3	389 ± 15	3291 ±136	17/01/83
RW1652	J222	≤0.5	≤0.5	6 ± 3	77 ± 6	13 ± 3	47 ± 5	17/01/83
RW1653	J223	≤0.5	≤0.5	≤0.5	21 ± 3	5 ± 2	≤7	17/01/83
RW1654	J224	5.7± 1.5	8.1± 2.0	56 ± 8	72 ± 6	1533 ± 48	1400 ±100	17/01/83
RW1655	J225	4.6± 1.4	41 ± 4	9 ± 4	33 ± 4	34 ± 4	≤7	17/01/83
RW1656	J226	9.0± 1.3	14.0± 1.7	245 ± 16	61 ± 4	326 ± 15	2591 ±108	17/01/83
RW1657	J227	1.4± 0.6	6.4± 1.4	4 ± 3	78 ± 6	25 ± 4	41 ± 5	17/01/83
RW1658	J228	≤0.5	2.5± 0.8	6 ± 2	91 ± 5	15 ± 2	43 ± 6	17/01/83
RW1659	J229	≤0.5	1.2± 0.7	2 ± 1	92 ± 5	10 ± 2	30 ± 5	17/01/83
RW1660	J230	≤0.5	≤0.5	5 ± 2	89 ± 5	5.1± 1.2	44 ± 6	18/01/83
RW1661	J231	≤0.5	≤0.5	≤0.5	13 ± 2	≤0.5	≤7	18/01/83
RW1662	J232	≤0.5	≤0.5	≤0.5	18 ± 3	1.8± 1.2	≤7	18/01/83
RW1663	J233	≤0.5	≤0.5	≤0.5	20 ± 5	≤0.5	17 ± 8	18/01/83
RW1664	J234	≤0.5	≤0.5	≤0.5	18 ± 3	2.2± 1.5	13 ± 6	18/01/83

Monenco No.	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		Activities in pCi/litre						
RW1665	J235	≤0.5	1.0± 0.5	≤0.5	15 ± 2	0.7± 0.5	9 ± 7	18/01/83
RW1666	J236	1.1± 0.4	14 ± 2	≤0.5	40 ± 4	16 ± 3	32 ± 5	18/01/83
RW1667	J237	≤0.5	1.1± 0.6	≤0.5	79 ± 6	16 ± 3	14 ± 4	18/01/83
RW1668	J238	≤0.5	0.5± 0.6	≤0.5	20 ± 2	8 ± 1	21 ± 5	18/01/83
RW1669	J239	≤0.5	≤0.5	4 ± 2	129 ± 8	309 ± 16	170 ± 11	18/01/83
RW1670	J240	≤0.5	≤0.5	≤0.5	100 ± 6	20 ± 3	43 ± 6	18/01/83
RW1671	J241	≤0.5	3 ± 1	2 ± 1	42 ± 5	850 ± 35	51 ± 6	18/01/83
RW1672	J242	≤0.5	≤0.5	2 ± 1	8.5± 1.7	117 ± 8	17 ± 5	17/01/83
RW1673	J243	10 ± 1	25 ± 2	56 ± 8	140 ± 8	1316 ± 44	636 ± 29	17/01/83
RW1674	J244	1.1± 0.5	2.8± 0.9	4 ± 3	85 ± 5	25 ± 3	23 ± 5	17/01/83
RW1675	J245	≤0.5	≤0.5	≤0.5	65 ± 5	12 ± 2	12 ± 4	17/01/83
RW1676	J246	2.1± 0.6	19 ± 2	5 ± 3	100 ± 6	40 ± 5	85 ± 8	17/01/83
RW1677	J247	≤0.5	0.7± 0.6	2 ± 1	8.7± 1.7	3.6± 1.3	≤4 ± 4	17/01/83
RW1678	J248	≤0.5	0.6± 0.5	≤0.5	130 ± 8	25 ± 4	20 ± 4	18/01/83
RW1679	J249	10.3± 1.4	15 ± 2	73 ± 8	104 ± 5	1670 ± 48	274 ± 15	18/01/83
RW1680	J250	0.8± 0.5	1.7± 0.9	2 ± 1	188 ±10	75 ± 7	9 ± 4	18/01/83
RW1681	J251	≤0.5	≤0.5	≤0.5	26 ± 3	15 ± 2	10 ± 4	18/01/83
RW1682	J252	≤0.5	≤0.5	3 ± 2	74 ± 6	10 ± 2	6 ± 4	18/01/83
RW1683	J253	≤0.5	≤0.5	11 ± 6	101 ± 7	10 ± 3	9 ± 4	18/01/83
RW1684	J254	≤0.5	≤0.5	3 ± 2	1.5± 0.7	6 ± 2	≤4 ± 4	19/01/83
RW1685	J255	≤0.5	≤0.5	≤0.5	97 ± 4	35 ± 3	25 ± 5	19/01/83
RW1686	J256	≤0.5	≤0.5	10 ± 3	118 ± 5	39 ± 3	15 ± 4	19/01/83
RW1687	J257	≤0.5	≤0.5	3 ± 2	68 ± 5	31 ± 4	41 ± 5	19/01/83
RW1688	J258	≤0.5	≤0.5	3 ± 2	91 ± 6	40 ± 4	11 ± 4	19/01/83

CANMET, Elliot Lake, Ontario

Monenco No.	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		Activities in pCi/litre						
RW1689	J259	0.5	0.5	0.5	72 ± 5	18 ± 5	22 ± 5	19/01/83
RW1690	J260	0.5	0.5	0.5	68 ± 1	18 ± 1	≤4 ± 4	19/01/83
RW1691	J261	5.0± 1.2	252 ±11	33 ± 7	128 ± 8	2703 ±80	1069 ± 29	19/01/83
RW1692	J262	0.5	1.3± 0.7	2 ± 1	154 ± 7	31 ± 3	42 ± 6	19/01/83
RW1693	J263	0.5	0.5	12 ± 3	167 ± 6	30 ± 2	12 ± 5	19/01/83
RW1694	J264	0.7± 0.4	1.1± 0.7	4 ± 2	122 ± 7	35 ± 4	12 ± 4	19/01/83
RW1695	J265	0.5	0.5	4 ± 3	93 ± 7	41 ± 5	11 ± 5	19/01/83
RW1696	J266	0.5	0.5	4 ± 3	137 ± 7	23 ± 3	≤7 ± 7	19/01/93

CANMET, Elliot Lake, Ontario — Vegetation and Soil

Monenco No	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		Activities in pCi/gram						
RS1697	K1	12.3± 1.3	19.1± 1.7	38 ± 2	119 ± 4	28 ± 2	79 ± 4	20/01/83
RS1698	K2	15.4± 1.5	49 ± 3	21 ± 2	406 ±11	140 ± 5	305 ±13	20/01/83
RS1699	K3	1.6± 0.5	40 ± 3	3 ± 2	296 ± 9	96 ± 4	245 ±11	20/01/83
RS1700	K4	5.6± 1.0	46 ± 3	7 ± 2	245 ± 9	55 ± 4	228 ±10	20/01/83
RS1701	K5	5.0± 0.8	43 ± 3	11 ± 2	227 ± 8	64 ± 4	197 ± 9	20/01/83
RS1702	K6	3.2± 0.7	15 ± 2	2 ± 1	136 ± 6	42 ± 3	95 ± 5	20/01/83
RS1703	K7	2.2± 0.4	4.9± 0.6	2 ± 1	8.8± 0.8	3.1± 0.5	5.4± 1.1	20/01/83
RS1704	K8	1.9± 0.4	6.4± 0.7	1.3± 0.6	11.8± 0.8	4.6± 0.6	8.0± 1.2	20/01/83
RS1705	K9	9.3± 0.9	62 ± 3	6.1± 1.3	522 ±14	213 ± 7	441 ±19	20/01/83
RP1706	K10	≤0.1	≤0.1	≤0.1	3.6± 0.2	≤0.1	2.2± 0.7	26/11/82
RP1707	K11	≤0.1	≤0.1	≤0.1	0.3± 0.1	≤0.1	0.6± 0.6	24/11/82
RP1708	K12	≤0.1	≤0.1	≤0.1	7.0± 0.5	0.4± 0.1	2.9± 0.7	24/11/82
RP1709	K13	≤0.1	≤0.1	≤0.1	11.5± 0.7	0.7± 0.1	2.3± 0.7	24/11/82
RP1710	K14	≤0.1	0.5± 0.1	≤0.1	3.5± 0.3	0.3± 0.1	2.2± 0.7	24/11/82
RP1711	K15	0.2± 0.1	0.6± 0.1	≤0.1	8.4± 0.5	0.4± 0.1	5.3± 0.8	24/11/82
RP1712	K16	≤0.1	0.2± 0.1	≤0.1	8.2± 0.5	0.4± 0.1	0.9± 0.6	24/11/82
RP1713	K17	≤0.1	≤0.1	≤0.1	1.9± 0.3	0.3± 0.1	0.6± 0.6	24/11/82
RP1714	K18	≤0.1	≤0.1	≤0.1	0.2± 0.1	2.6± 0.4	0.6± 0.6	24/11/82
RP1715	K19	≤0.1	≤0.1	≤0.1	3.9± 0.3	0.7± 0.1	0.6± 0.6	24/11/82
RP1716	K20	≤0.1	0.2± 0.1	≤0.1	6.4± 0.4	1.3± 0.2	1.1± 0.7	24/11/82
RP1717	K21	≤0.1	≤0.1	≤0.1	18.8± 0.9	3.3± 0.3	1.2± 0.7	24/11/82
RP1718	K22	≤0.1	≤0.1	≤0.1	3.5± 0.2	0.4± 0.1	1.3± 0.7	24/11/82
RP1719	K23	≤0.1	≤0.1	≤0.1	6.0± 0.5	0.7± 0.2	0.8± 0.7	24/11/82
RP1720	K24	≤0.1	≤0.1	≤0.1	3.0± 0.4	0.3± 0.2	0.6± 0.6	24/11/82

Monenco No	Desc.	Th^{232}	Th^{230}	Th^{228}	Ra^{226}	Ra^{223}	Pb^{210}	Date
		Activities in pCi/gram						
RP1721	K25	≤0.1	≤0.1	≤0.1	0.9± 0.2	≤0.1	0.7± 0.6	24/11/82
RP1722	K26	≤0.1	≤0.1	≤0.1	17.1± 1.0	1.7± 0.4	6.9± 0.9	24/11/82
RP1723	K27	≤0.1	≤0.1	≤0.1	25.5± 0.8	3.2± 0.3	2.5± 0.8	24/11/82
RP1724	K28	≤0.1	≤0.1	≤0.1	2.3± 0.2	0.5± 0.1	0.6± 0.6	24/11/82
RP1725	K29	≤0.1	0.2± 0.1	≤0.1	3.4± 0.3	0.9± 0.2	1.0± 0.7	24/11/82
RP1726	K30	≤0.1	≤0.1	≤0.1	6.4± 0.2	1.8± 0.1	1.9± 0.7	24/11/82
RP1727	K31	≤0.1	0.2± 0.1	≤0.1	13.5± 0.6	4.3± 0.4	2.1± 0.7	24/11/82
RP1728	K32	≤0.1	≤0.1	≤0.1	1.9± 0.3	1.5± 0.4	0.6± 0.6	24/11/82
RP1729	K33	≤0.1	0.3± 0.1	≤0.1	2.2± 0.2	1.8± 0.3	3.1± 0.8	24/11/82
RP1730	K34	≤0.1	≤0.1	≤0.1	14.0± 0.8	3.9± 0.5	2.8± 0.8	24/11/82
RP1731	K35	≤0.1	≤0.1	≤0.1	27.6± 1.0	≤0.1	1.6± 0.8	24/11/82
RP1732	K36	≤0.1	≤0.1	≤0.1	4.0± 0.4	0.9± 0.3	0.7± 0.6	24/11/82
RP1733	K37	≤0.1	≤0.1	≤0.1	2.7± 0.2	0.6± 0.3	0.8± 0.7	24/11/82
RP1734	K38	≤0.1	≤0.1	≤0.1	1.9± 0.2	0.8± 0.2	0.6± 0.6	24/11/82
RP1735	K39	≤0.1	≤0.1	≤0.1	2.0± 0.3	0.6± 0.2	0.6± 0.6	24/11/82

POOR

QUALITY

ORIGINAL